

WHAT IS CLAIMED IS:

1. A sound producing mechanism for use in a spinning reel having a reel unit and a spool that is disposed around a spool shaft, a fishing line being wound around and released from the spool, the sound producing mechanism producing sound by relative rotation between the spool and the reel unit, the spinning reel sound producing mechanism comprising:

a first sound producing portion having

an attachment portion mounted to one of the spool and the reel unit, and

a plurality of saw tooth portions that are formed in a saw tooth shape

circumferentially apart on an outer peripheral surface of the

attachment portion; and

a second sound producing portion that is mounted to the other of the spool and the reel unit, and has a front end portion that is configured to come into contact with the saw tooth portions of the first sound producing portion,

the first sound producing portion being mounted to the one of the spool and the reel unit so as to be rotatable relative to the second sound producing portion when the spool rotates in a line releasing direction and unrotatable when the spool rotates in a line winding direction.

2. The spinning reel sound producing mechanism as set forth in claim 1, wherein:

the first sound producing portion is coupled to the spool shaft.

3. The spinning reel sound producing mechanism as set forth in claim 2, wherein:

the second sound producing portion is coupled to the spool.

4. The spinning reel sound producing mechanism as set forth in claim 1, further comprising

a friction member that is disposed between the first sound producing portion and

the one of the spool and the reel unit, to restrict rotation of the first sound producing portion relative to the one of the spool and the reel unit.

5. The spinning reel sound producing mechanism as set forth in claim 4,

5 further comprising

a retaining member that is non-rotatably mounted on the spool shaft and retains a bearing that is disposed on an inner peripheral side of the spool,

wherein

the first sound producing portion is coupled to the spool shaft, and

10 the friction member is disposed between the first sound producing portion and the retaining member.

6. The spinning reel sound producing mechanism as set forth in claim 5,
wherein:

15 an inner peripheral surface of the retaining member is formed so that its cross-section is circular, and the spool shaft is formed so that its cross-section is non-circular;
and

the sound producing mechanism further includes spacer members that are inserted in a gap between the inner peripheral surface of the retaining member and the spool shaft.

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7. The spinning reel sound producing mechanism as set forth in claim 5,
wherein

an inner diameter of the plurality of saw tooth portions of the first sound producing portion is larger than an outer diameter of the bearing.

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8. The spinning reel sound producing mechanism as set forth in claim 4,
wherein

the friction member is an annular member made of an elastic material.

9. The spinning reel sound producing mechanism as set forth in claim 2,
wherein

the first sound producing portion is a closed end cylindrical member in which the

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saw-tooth portions are arranged on an outer peripheral surface of a cylindrical portion.

10. The spinning reel sound producing mechanism as set forth in claim 1,
wherein

5 the second sound producing portion includes
a pawl member that is pivotably mounted to the spool such that a front end
portion of the pawl member can come into contact with the saw
tooth portions; and
a spring member that urges the front end portion of the pawl member
10 toward the saw tooth portions.

11. A spinning reel comprising
a handle;
a reel unit rotatively supporting the handle;
15 a rotor rotatively supported on a front of the reel unit;
a spool that is disposed on a front of the rotor and around a spool shaft so as to be
shifted back and forth, a fishing line being wound around and released from the spool; and
a sound producing mechanism for producing sound by relative rotation between
the spool and the reel unit, the spinning reel sound producing mechanism including:
20 a first sound producing portion having
an attachment portion mounted to one of the spool and the reel
unit, and
a plurality of saw tooth portions that are formed in a saw tooth
shape circumferentially apart on an outer peripheral
25 surface of the attachment portion; and
a second sound producing portion that is mounted to the other of the spool
and the reel unit and has a front end portion that is configured to
come into contact with the saw tooth portions of the first sound
producing portion,
30 the first sound producing portion being unrotatably mounted to the one of the spool
and the reel unit when the spool rotates in a line releasing direction and rotatably mounted
to the one of the spool and the reel unit when the spool rotates in a line winding direction.

12. The spinning reel as set forth in claim 11, wherein:
the first sound producing portion is coupled to the spool shaft.

5 13. The spinning reel as set forth in claim 12, wherein:
the second sound producing portion is coupled to the spool.

14. The spinning reel as set forth in claim 11, further comprising
a friction member that is disposed between the first sound producing portion and
10 the one of the spool and the reel unit, to restrict rotation of the first sound producing
portion relative to the one of the spool and the reel unit.

15. The spinning reel as set forth in claim 14, further comprising
a retaining member that is non-rotatably mounted on the spool shaft and retains a
15 bearing that is disposed on an inner peripheral side of the spool,
wherein
the first sound producing portion is coupled to the spool shaft, and
the friction member is disposed between the first sound producing portion and the
retaining member.

20 16. The spinning reel as set forth in claim 15, wherein:
an inner peripheral surface of the retaining member is formed so that its cross-
section is circular, and the spool shaft is formed so that its cross-section is non-circular;
and
25 the sound producing mechanism further includes spacer members that are inserted
in a gap between the inner peripheral surface of the retaining member and the spool shaft.

17. The spinning reel as set forth in claim 15, wherein
an inner diameter of the plurality of saw tooth portions of the first sound producing
30 portion is larger than an outer diameter of the bearing.

18. The spinning reel as set forth in claim 14, wherein

the friction member is an annular member made of an elastic material.

19. The spinning reel as set forth in claim 12, wherein
the first sound producing portion is a closed end cylindrical member in which the
5 saw-tooth portions are arranged on an outer peripheral surface of a cylindrical portion.

20. The spinning reel as set forth in claim 11, wherein
the second sound producing portion includes
a pawl member that is pivotably mounted to the spool such that a front end
10 portion of the pawl member can come into contact with the saw
tooth portions; and
a spring member that urges the front end portion of the pawl member
toward the saw tooth portions.